REMARKS

This responds to the Office Action dated July 14, 2005. Claims 1, 7, 14, 22, 34, 38, 42, and 48 are amended; as a result, claims 1-51 are now pending in this application.

Information Disclosure Statements

Applicant is submitting an Information Disclosure Statement and a 1449 Form along with this Response. Applicant respectfully requests that an initialed copy of the 1449 Form be returned to Applicant's Representatives to indicate that the references been considered by the Examiner.

§103 Rejection of the Claims

Claims 1-51 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tremblay et al. (U.S. 6,014,723) in view of Spencer (U.S. 6,240,499). It is of course fundamental that in order to sustain an obviousness rejection that each and every element or step must me taught or suggested in the proposed combination of references.

In the interest of brevity, Applicants incorporate by reference the previous arguments made with respect to the Tremblay reference and with respect to the admitted prior art, which is again being asserted by the Examiner in the present action.

The Spencer reference is directed to techniques for improving access to data storage, such as a memory array. Spencer destroys and reallocates memory locations to handle sparse data, which is associated with a memory array.

Each of the independent claims was rejected based on a proposed combination of Tremblay and Spencer, where the Spencer reference is asserted as having Applicants' teaching of dimensional overlay on a one-dimensional array. In support of this conclusion drawn by the Examiner, the resize() function described in Spenser at column 9 lines 8-22 was cited by the Examiner.

Applicants have amended the independent claims to further clarify the language of the claims, now reciting language indicating that the overlay includes references to memory or storage that is associated with the one-dimensional array. That is, the overlay creates additional memory or storage, which references the persistent memory or storage of the one-dimensional

array for purposes of forming or creating the overlay. The additional memory or storage of the overlay is non-persistent and exists within the scope of its subroutine-declared reference and use.

The Spenser reference notes that the resize() function "allocates memory for data, after freeing memory which has been previously allocated for the array to be resized." Spenser, col. 9, lines 3-5. Furthermore, the resize() function "destroys the existing contents of the array . . .." Spenser, col. 9, lines 12-13. If there is a desire to keep the contents of the array with the resize() function, then an additional grow() function may be used which then "cop[ies] the data before freeing the previously used memory." Spenser, col. 9, lines 21-22.

The resize() function is used to manage memory for an array and that in doing this the resize() function frees previous memory used by an array and then reallocates new memory. If the contents of an array are desired to be persistent, then the contents are copied to newly allocated memory locations and the previous memory locations are freed. From this implementation technique, it is clear that Spenser does not teach an overlay of an array, but rather restructures memory usage to improve memory management of arrays. Spenser purports to correct and optimize memory management for arrays, and does not create different views on existing memory locations.

Conversely, the overlays of the present subject matter use new or temporary memory or storage to house references to persistent memory locations associated with the arrays which are being overlaid. Applicants' technique gives a user control to custom create multidimensional views to persistent storage associated with a one-dimensional array; whereas Spenser optimizes memory for arrays by freeing memory and reallocating it to eliminate sparse memory, which may be associated with the arrays.

Additionally, with respect to independent claims 22, 34, 38, and 48, Applicants have amended these claims to highlight that another important distinction is not present in the cited references individually or in combination with one another. In the present application, the boundary policy or processing associated with exception processing for an array is configurable and user-defined. Conversely, there is no ability to achieve this level of customization within the teachings of the references. The references rely on pre-defined and static boundary policies that are usually handled by the operating system (OS) as a fault condition or as programming language specific processing.

Thus, Applicants respectfully submit that the proposed combination fails to render Applicants' amended independent claims obvious because the proposed combination fails to teach a multidimensional overlay of a one-dimensional array where that overlay includes references to persistent memory or storage associated with one-dimensional array. Additionally, with respect to some of the independent claims the combination fails to teach or suggest a configurable or user-defined boundary policy or processing, which is now positively recited in Applicants' amended independent claims 22, 34, 38, and 48. Accordingly, Applicants respectfully request that the present rejections be withdrawn and the claims allowed.

CONCLUSION

Applicants respectfully submit that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney, Joseph P. Mehrle at (513) 942-0224, or the below-signed attorney at (612) 373-6960 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By their Representatives,

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Date 10-14-05

By _____
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 14 day of October, 2005.

KACIA LEE
Name

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Signature